

## **SUMMARY OF THE INVENTION**

A method is disclosed for hermetically sealing a post media-filled package with a metal cap. The method can include the operation of filling a MEMS package through a fill port with at least one medium. A further operation can be plugging the fill port in the MEMS package with a sealant. Another operation can include depositing a metal cap over the sealant to hermetically seal the fill port.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a flow chart depicting a method for hermetically sealing a post media-filled MEMS package with a metal cap in accordance with an embodiment of the present invention;

FIGS. 2A-D are diagrams showing a system for hermetically sealing a break in a bond ring of a post media-filled MEMS package with a metal cap in accordance with an embodiment of the present invention; and

FIGS. 3A-D are diagrams showing a system for hermetically sealing a fill port that is a through-hole in a lid of a post media-filled MEMS package with a metal cap in accordance with an embodiment of the present invention.

## **DETAILED DESCRIPTION**

Reference will now be made to the exemplary embodiments illustrated in the drawings, and specific language will be used herein to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended. Alterations and further modifications of the inventive features illustrated herein, and additional applications of the principles of the inventions as illustrated herein, which would occur to one skilled in the relevant art and having possession of this disclosure, are to be considered within the scope of the invention.

In order to overcome the problems described above and to provide an efficient system and method for hermetically sealing a MEMS device with minimal heating and vibrational damage, the present invention provides a system and methods for hermetic sealing of a post media-filled package with a metal cap as depicted in FIGS. 1 - 3. As used herein, "medium" and media refer to a gas, liquid or solid placed within the MEMS package or a vacuum created within the MEMS package in which substantially all of the atmosphere is evacuated from within the MEMS package.

The MEMS device may need a specific type of medium to contribute to and/or counteract heat dissipation, dampening, friction, contamination, oxidation effects, and so